

Atty Dkt. No. FLOW-011
USSN: 09/802,479

REMARKS

Formal Matters

Claims 1-21, 27 and 29-39 are pending after entry of the amendments set forth herein.

Within the response to the first Office Action claims 22-26 and 28 were canceled and new claims 29-34 were added and are shown here as "previously presented."

Claims 17-21 are allowed.

Here, claims 1, 17, and 27 have been amended to more particularly point out and distinctly claim the invention.

The amendments to claim 1 relating to the term "ductile" are fully supported within the unamended form of the claim and the original claim 1. Further, the term "ductile" is defined in the specification as paragraph [0041]. Addition of the term relating to "longitudinal axis" is supported within the original version of claim 1 and throughout the specification and shown within Figure 1. The terminology with respect to how the focusing fluid acts on the preform is supported in original claim 1, in the specification at numerous places such as at page 12 paragraph 54 and shown within Figure 1. In response to the objection to the term "downstream" the phrase which includes such has been deleted from claim 1.

Claim 17 was indicated as being allowed. However, in order to provide for consistency in the claim terminology claim 17 has been amended. Specifically, the phrase which includes the term "downstream" which was objected to in the Office Action regarding claim 1 has been deleted from claim 17. Further, in view of the objection to claim 29 which does not use the term "compresses" the term "compresses" has been deleted from claim 17 and replaced with the term "draws" which is supported throughout the specification, defined at paragraph [0042], shown in Figure 1 and exemplified in example 1 such as in paragraph [0087] which refers to "drawing."

Claim 27 has been amended so that it is clearly specific to producing a "hollow optical fiber." This is supported within the original version of claim 27 and within the specification such as at page 5, paragraph 15. Further, in that the term "hollow tube" was included within original claim 27 the term is used throughout the claim. Still further, the Examiner objected to the term "channel" as not being fully described in the specification and this term has been deleted from claim 27.

Applicants respectfully request reconsideration of the application in view of the amendments and remarks made herein.

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No new matter has been added.

Rejection under 35 U.S.C. §112, first paragraph

Claims 1-16, 27 and 29-34 were rejected under 35 U.S.C. §112, first paragraph. The rejection is traversed as applied and as it is applied to the presently pending claims. However, applicants wish to expedite prosecution of the application. Accordingly, applicants have made formal amendments to the claims in an attempt to overcome or render moot these rejections.

The first objection was directed at claim 27 arguing that the term "channel" was not sufficiently supported in the specification. The preform shown in Figure 1 is drawn through a channel in the nozzle. The Examiner is correct in that the term is not used throughout the specification. Further, the claim defines the invention adequately without the use of the term. Accordingly, claim 27 has been amended to delete the term "channel" thereby rendering the rejection moot. Accordingly, claim 27 is believed to be in condition for allowance in that no other objection has been made with respect to this claim.

Claim 1 was objected to due to the use of the term "the preform accelerating the preform". Applicants understand how the term may have been interpreted as unclear by the Examiner. Accordingly, applicants have amended the claim to delete the specific language and include language which is believed to clearly describe the methodology of the invention. Specifically, as indicated in the claim the focusing fluid is caused to flow in a direction along with the preform towards a first end of the preform. This flow is carried out in a manner so that a preform is accelerated by tangential sweeping forces exerted on the preform by the focusing fluid. This causes a reduction in diameter of the preform and an increase in the length of the preform. Such is clearly shown within Figure 1 and described at numerous places in the specification such as at page 12, line 54 and exemplified within the examples such as Example 1 beginning on page 22 at paragraph [0056].

Claim 1 was also objected to due to the use of the term "downstream" which was indicated as not being completely supported in the specification. Applicants do not acquiesce to the validity of this rejection in that the term "downstream" has a well understood meaning and the direction of flow is shown in Figure 1 in a manner such that one can readily determine which point is downstream of another. Notwithstanding such applicants agree that the term is not used extensively throughout the specification and believe that the invention is readily understandable as claimed in claim 1 without the use of this term. Accordingly, the phrase "positioned downstream of the flow of the focused fluid" has been deleted from claim 1 thereby rendering the rejection moot.

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No other objections appear with respect to claim 1. However, applicants wish to specifically point out support for the previously added language relating to accelerating the preform by the tangential sweeping forces exerted by the focusing fluid. Specifically, applicants refer the Examiner to paragraph 54 on page 12. Specifically, the second sentence of that reads as follows "After the preform emerges from the exit port, it is accelerated by tangential sweeping forces exerted by the focusing fluid (e.g. gas stream) flowing on its surface, which gradually decreases the preform cross-section dimensions." Applicants made a serious attempt to include a claim language version of this description into claim 1 into the prior office action. If applicants' specific language is objected to by the Examiner applicants would be amenable to other language as supported within paragraph 54 in order to place the application in condition for allowance.

In that no other rejections remain with respect to claim 1 this claim is believed to be in condition for allowance as are the claims 2-16 which are dependent directly or indirectly thereon.

Claim 17 was indicated as being allowed. However, in that the term "downstream" was objected to as regard to claim 1 when it was used in a similar manner applicants have amended claim 17 to delete the phrase "positioned downstream of the flow of the stream of molten viscous liquid." Further, the term "compresses" has been deleted from claim 17 and replaced with the term "draws" as supported in the specification such as at paragraph [0042] which defines the term and in example 1 beginning on page 22 and specifically at page 23 paragraph [0087] which refers to "drawing of this preform."

Accordingly, claim 17 as well as the claims 18-21 which are dependent directly or indirectly thereon are believed to be allowable as indicated within the Office Action.

Claim 29 was objected to as not being supported in the specification as it depends from claim 17. Specifically, the Office Action pointed out that claim 17 referred to "compressing the fluid" whereas such as not referred to within claim 29. Applicants agree with the Examiner that the term "compresses" does not accurately describe the invention and could be misinterpreted. Accordingly, claim 17 has been amended to eliminate the use of this term. Claim 17 now claims a method of producing a fiber from molten viscous liquid. The method includes extruding the stream of molten viscous liquid and then focusing that stream with a focusing fluid which draws the stream having a first circumference until it has a narrowed second circumference which is less than the first circumference. Thus, claim 17 is claiming a method of producing a fiber from molten viscous liquid using a focusing fluid.

Claim 29 is dependent on claim 17. In claim 29 the molten liquid is supplied by a "supply source" which has an antecedent basis on claim 17. However, the "supply source" of claim 29 is further defined to be comprised of two concentrically positioned tubes as described in the specification such as

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at page 5, paragraph [0015]. The molten liquid may be focused with the focusing fluid to form a solid fiber as per claim 17. Alternatively, the molten liquid may be supplied through the two concentrically positioned tubes with the center tube being filled with gas so as to produce a hollow fiber as defined in claim 29. In view of such the objections to claim 29 are believed to have been overcome and claim 29 as well as the claims dependent directly or indirectly thereon are believed to be in condition for allowance.

Conclusion

The independent claims 1, 17 and 27 have been amended to more particularly point out and distinctly claim the invention. Although applicants do not acquiesce to the validity of the rejections applicants have attempted to address each of the objections raised within the Office Action and amend the claims in a manner which either overcomes the rejection or renders it moot. Further, specific support within the specification, examples and drawings have been pointed out so as to clearly indicate that the methods claimed are fully supported within the originally filed application. In view of such all of the claims are believed to be in condition for allowance and an indication of such is respectfully requested.

Applicant submits that all of the claims are in condition for allowance, which action is requested. If the Examiner finds that a telephone conference would expedite the prosecution of this application, please telephone the undersigned at the number provided.

The Commissioner is hereby authorized to charge any underpayment of fees associated with this communication, including any necessary fees for extensions of time, or credit any overpayment to Deposit Account No. 50-0815, order number FLOW-011.

Respectfully submitted,
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